

CLAIMS:

1. An electric lamp which comprises:
a lamp envelope having an inner surface;
means within the lamp envelope for generating ultraviolet radiation; and
a layer of a luminescent material on said inner surface comprising a phosphor derived from a mixture of a cool-white calcium halophosphate, a red-emitting yttrium oxide (YOX), a green-emitting cerium, terbium lanthanum phosphate (LAP), and a blue-emitting europium-activated barium magnesium hexa-aluminate (BAM).
2. A lamp as claimed in claim 1, wherein a cerium,terbium magnesium hexa-aluminate (CAT) component, or a cerium, terbium, gadolinium pentaborate (CBT) component is substituted for the green-emitting (LAP) component.
3. A lamp as claimed in claim 1, wherein a divalent europium-activated chloro-strontium, calcium, barium phosphate (SCA) component, or a divalent europium activated strontium chlorophosphate (apatite)(SCAP) component is substituted for the BAM component.
4. A lamp as claimed in claim 1, wherein said phosphor comprises from about 85 wt% to about 96 wt% of a cool-white calcium halophosphate, from about 1.6 to about 5.8 wt% of a red-emitting yttrium oxide (YOX), from about 1.7 to about 6.5 wt% of a green-emitting cerium, terbium lanthanum phosphate (LAP), and from about 0.7 to about 2.7 wt% of a blue-emitting europium-activated barium magnesium hexa-aluminate (BAM).
5. A low pressure low-mercury consumption mercury vapor fluorescent lamp, comprising:
 - a. a tubular, light transmissive lamp envelope having opposing sealed ends, an inner tubular surface and enclosing a discharge space between said sealed ends with a volume;
 - b. a filling of elemental mercury and a rare gas;
 - c. a pair of discharge electrodes each arranged at a respective sealed end of said lamp envelope;

d. means for connecting said discharge electrodes to a source of electric potential outside of said lamp envelope, whereby during lamp operation a gas discharge is maintained between said discharge electrodes, which gas discharge emits ultraviolet radiation;

e. optionally, a first, light transmissive and ultraviolet radiation reflecting layer disposed adjacent said inner surface of said lamp envelope, and

f. a layer of a luminescent material comprising a phosphor derived from a mixture of a cool-white calcium halophosphate, a red-emitting yttrium oxide (YO_X), a green-emitting cerium, terbium lanthanum phosphate (LAP), and a blue-emitting europium-activated barium magnesium hexa-aluminate (BAM).

6. A lamp as claimed in claim 5, wherein said phosphor comprises from about 85 wt% to about 96 wt% of a cool-white calcium halophosphate, from about 1.6 to about 5.8 wt% of a red-emitting yttrium oxide (YO_X), from about 1.7 to about 6.5 wt% of a green-emitting cerium, terbium lanthanum phosphate (LAP), and from about 0.7 to about 2.7 wt% of a blue-emitting europium-activated barium magnesium hexa-aluminate (BAM).

7. A lamp as claimed in claim 6, wherein a conductive semiconductor layer of tin oxide is applied as a starting aid between the inner surface and the precoat layer.

8. A low-mercury consumption mercury vapor fluorescent lamp, comprising:

a. a tubular, light transmissive lamp envelope having opposing sealed ends, an inner tubular surface and enclosing a discharge space between said sealed ends with a volume;

b. a filling of elemental mercury and a rare gas;

c. a pair of discharge electrodes each arranged at a respective sealed end of said lamp envelope;

d. means for connecting said discharge electrodes to a source of electric potential outside of said lamp envelope, whereby during lamp operation a gas discharge is maintained between said discharge electrodes, which gas discharge emits ultraviolet radiation;

e. optionally, a first, light transmissive and ultraviolet radiation reflecting pre-coat layer disposed adjacent said inner surface of said lamp envelope;

f. optionally, a conductive semiconductor layer of tin oxide applied as a starting aid between the inner surface and the precoat layer; and

g. a layer of a luminescent material comprising a phosphor derived from a mixture comprising from about 85 wt% to about 96 wt% of a cool-white calcium halophosphate, from about 1.6 to about 5.8 wt% of a red-emitting yttrium oxide (YOX), from about 1.7 to about 6.5 wt% of a green-emitting cerium, terbium lanthanum phosphate (LAP), and from about 0.7 to about 2.7 wt% of a blue-emitting europium-activated barium magnesium hexa-aluminate (BAM).

9. A lamp as claimed in claim 8, wherein said envelope is convoluted and is selected from the group of envelopes comprising at least two leg segments joined by a bent-U section, and envelopes bent to a desired shape.

10. A phosphor blend for low-mercury consumption fluorescent lamps which comprises a mixture of a cool-white calcium halophosphate, a red-emitting yttrium oxide (YOX), a green-emitting cerium, terbium lanthanum phosphate (LAP), and a blue-emitting europium-activated barium magnesium hexa-aluminate (BAM).

11. A phosphor blend as claimed in claim 10, wherein said phosphor comprises a mixture of from about 85 wt% to about 96 wt% of a cool-white calcium halophosphate, from about 1.6 to about 5.8 wt% of a red-emitting yttrium oxide (YOX), from about 1.7 to about 6.5 wt% of a green-emitting cerium, terbium lanthanum phosphate (LAP), and from about 0.7 to about 2.7 wt% of a blue-emitting europium-activated barium magnesium hexa-aluminate (BAM).

12. A phosphor blend as claimed in claim 11, wherein a cerium, terbium magnesium hexa-aluminate (CAT) component, or a cerium, terbium, gadolinium pentaborate (CBT) component is substituted for the green-emitting (LAP) component.

13. A phosphor blend as claimed in claim 11, wherein a divalent europium-activated chloro-strontium, calcium, barium phosphate (SCA) component, or a divalent europium activated strontium chlorophosphate (apatite)(SCAP) component is substituted for the BAM component.